

Business Inventories— Recent Trends and Position

THE rapid expansion in business inventories during the last four months of 1952 has been followed by relative stability so far this year. Such further additions as have occurred were in the durable goods industries, while the nondurable goods areas showed a small liquidation. The result of cautious

In view of the attention currently focused on this volatile sector of business, this article examines the character of the recent inventory changes, the distribution of inventory holdings, and their relative position by industrial groups. Several conclusions are apparent from the analysis:

1. About four-fifths of the entire rise of \$2.4 billion in the book value of business inventories since August 1952 occurred in five areas—motor vehicle, other transportation equipment, primary metal and fabricated metal manufacturing industries, and retail automotive dealers. Although part of the increase in these groups was associated with the steel strike in the summer of 1952, it also reflected the expansion required to support higher sales. In the first quarter of this year these groups showed only a small accumulation.

2. Considering their present composition, business inventories in the aggregate do not appear to be significantly out of line with the current rate of sales, as gauged by inventory-sales relations which have been experienced historically.

3. Inventories held by firms producing or handling durable goods seem to be moderately high in relation to current sales. The excess appears to be in part in stocks utilized for defense and related activities.

4. Inventories held by the nondurable goods sectors of business, on the other hand, do not appear to be out of line relative to the current rate of sales and, in fact, may be on the low side.

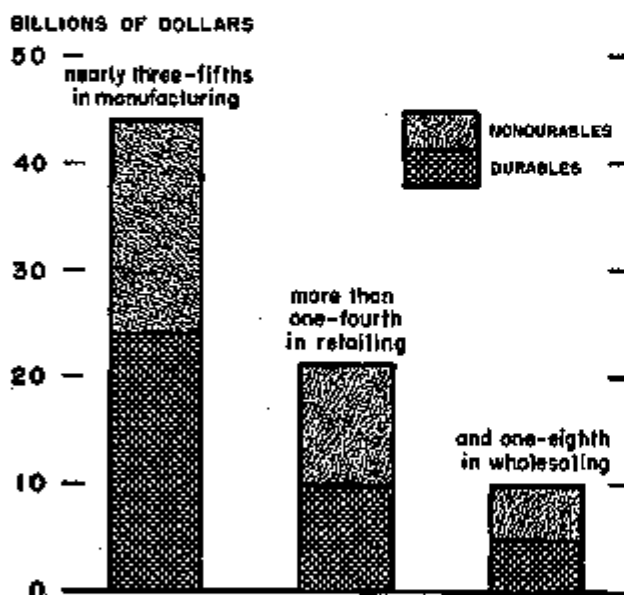
5. The present inventory-sales balance can be maintained as long as sales continue at the current high rate. The basis for wide inventory movements in the absence of a change in the trend of sales does not appear to be present. Industrial prices have been stable for some time, and supplies of most goods are generally adequate for prompt deliveries. Any significant change in demand would soon make inventories look out of line, since there is usually a lag in their adjustment to the new sales volume.

Inventory rise chiefly in durables

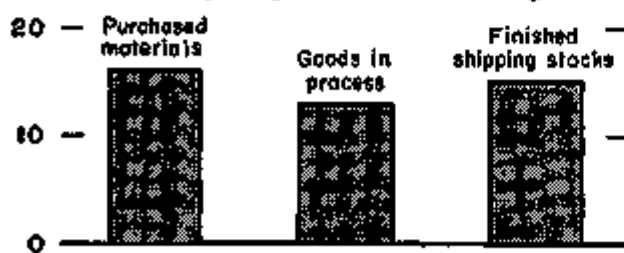
The inventory rise which has occurred since midsummer of last year, while of significant proportions, has lifted the overall book value of business inventories at the end of March to a point only \$1.6 billion from the year-ago total. The movements, however, have accentuated the divergence in trends in durable and nondurable goods stocks.

The steel shutdown in the summer was accompanied by some drawing down of stocks and by the end of August the value of business inventories had reached a low point of \$72.7 billion (seasonally adjusted) for the year. At the same time production and deliveries of many durable goods had slowed down appreciably. For example, retail deliveries of passenger cars in the third quarter of 1952 averaged

Business Inventories with a book value of \$75 billion in March 1953 were distributed as follows:



Manufacturers' Inventories were about equally divided among . . .



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business buying and increased consumption and fixed investments held total inventories to around \$75 billion, seasonally adjusted, during the first quarter.

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273,000 monthly, compared with 414,000 monthly in the second quarter of that year, and with 410,000 monthly in the third quarter of 1951; similarly, shipments of the non-electrical machinery industry dropped 10 percent from May to August, on a seasonally adjusted basis.

With the resumption of steel deliveries, production moved upward in the metal producing and fabricating industries. Also, demand became more buoyant in most major sectors of business, reflecting a number of favorable influences in addition to the increased flow of steel. To support the rising production and sales volume, business inventories were expanded by more than \$2 billion in the last four months of 1952. This accumulation also permitted the refilling of pipelines in many durable goods sectors in which they had earlier been partly depleted because of the steel shortage.

During the first 3 months of this year, inventory accumulation was relatively small—one-quarter as much as in the fourth quarter of 1952. The rise during the quarter in total business inventories amounted to about \$400 million, on a seasonally adjusted basis. Table 1 indicates the magnitudes and character of the recent shifts by major groups.

Five major groups of firms—producers of motor vehicles, other transportation equipment, primary and fabricated metals and products, and the automotive retail dealers—have accounted for nearly four-fifths, or \$1.9 billion, of the entire rise of \$2.4 billion in the value of business inventories since the end of August of last year. At the end of March of this year, these firms had a book value of inventories of \$14.7 billion, or less than one-fifth of the value of all business inventories. Moreover, the motor vehicle producers and retail automotive dealers were responsible for nearly three-fifths of the total increase in the book value of business inventories.

Most of the accumulation in the 5 major groups occurred during the last 4 months of 1952, with each group showing a sizable increase; in the first 3 months of 1953 these firms showed only a modest inventory rise of \$0.3 billion in the aggregate.

Business firms in industries other than the 5 listed above expanded their aggregate inventories by less than a half a billion dollars, or 1 percent, in the last 4 months of 1952 and the changes were relatively small among the component groups. Thus, the inventory accretion in that period was limited to those relatively few industries where demand picked up sharply and producers attempted to restore the inventory position they held prior to the steel shutdown.

During the first three months of 1953, the group of firms other than the five mentioned showed virtually no change in their inventories, in the aggregate. The durable goods sectors of these groups, however, showed a sizable inventory increase of a billion dollars which was about offset by a decline of nearly the same amount in the nondurable goods sectors.

The value of inventories held by nondurable goods manufacturers declined in the past 6 months—partly due to lower replacement cost—despite a rise in their sales; retail and wholesale nondurable goods firms just maintained their August 1952 level of inventories though their aggregate sales rose by nearly 3 percent, on a seasonally adjusted basis, from August 1952 to March 1953.

A number of important nondurable goods industries showed moderate reductions in the value of inventory holdings from August of last year to March of this year, despite rising sales trends. These include producers of textile mill products, foods, chemicals, and petroleum products. Thus, firms in these industries have displayed a rather cautious inventory policy, particularly since, as will be indicated later, nondurable goods inventories may have been somewhat low in relation to sales in the past year.

Actually, except for rising demands and the steel situation,

the other relevant factors have not been conducive to an aggressive inventory policy. Industrial prices throughout the past year and so far this year have been stable. Supplies of most goods have increased. Even for those commodities under control the gradual expansion in capacity has made for a progressive easing in these markets. Finally, the international tensions in this period have not shown signs of worsening.

Present distribution of inventories

The distribution of inventories among the various segments of business is of considerable interest since, depending on the industry, different practices are followed with respect to size

Table 1.—Value of Business Inventories

(Billions of dollars, seasonally adjusted)

Item	Book value				Change in book value		
	1952			1953	Aug.- Dec. 1952	Dec. 1952- Mar. 1953	Mar. 1953- Mar. 1953
	Mar. 31	Aug. 31	Dec. 31	Mar. 31			
Total.....	72.6	72.7	72.8	75.2	2.0	6.4	1.6
Manufacturing.....	42.2	43.1	43.3	43.8	.7	0	.5
Retail.....	28.3	10.7	20.3	21.2	1.1	.4	.9
Wholesale.....	16.1	0.0	10.1	10.2	.2	.1	.1
Durable goods firms.....	32.0	35.8	38.7	40.0	3.0	1.3	2.0
Manufacturing.....	22.4	23.2	24.2	24.0	1.1	.2	1.2
Motor vehicles and equipment.....	2.7	2.6	3.0	3.1	.4	.1	.4
Other transportation equipment, primary and fabricated metals and products.....	7.4	7.6	8.1	8.1	.5	0	.7
Other durables.....	12.3	12.6	13.2	13.3	.1	.2	0
Retail.....	9.0	8.6	8.4	10.1	.7	.9	.6
Automotive dealers.....	3.1	2.6	3.3	3.6	.7	.2	.4
Other durable goods stores.....	5.9	6.0	5.1	6.5	.1	.5	.1
Wholesale.....	5.1	4.0	5.1	5.3	.1	.3	.9
Nondurable goods firms.....	35.6	35.9	36.0	35.1	.1	-.9	-.5
Manufacturing.....	19.6	19.9	19.8	19.2	-.4	-.3	-.6
Retail.....	10.7	11.1	11.5	11.1	.2	-.4	-.4
Wholesale.....	5.0	4.9	5.1	4.8	.1	-.2	-.2
Addendum:							
Motor vehicles—producers and dealers; producers of other transportation equipment, and primary and fabricated metals and products.....	13.2	12.8	14.4	14.7	1.6	.3	1.5
Other business firms.....	60.4	59.9	60.4	60.6	.4	.1	.1

Source: U. S. Department of Commerce, Office of Business Economics.

and character of purchases for inventories, the timing of inventory investment in relation to sales movements, and the volume of inventory holdings in relation to sales. Manufacturers generally are concerned with policies at different stages of fabrication—working stocks consisting of purchased materials and goods-in-process, and shipping stocks of goods. Because these producers are dependent upon orders placed by other sellers, they are often caught by pressures of order cancellations or by demands for speeding up deliveries, so that inventories at the factory level are subject to wider fluctuations than is the case for other firms.

Retailers' stocks normally move directly in response to sales, and here the consumer is usually the controlling agent in shaping the inventory swings. Wholesalers' inventories

show smaller fluctuations than those of retailers and producers. This is so because wholesalers usually have a more direct control over their inventories, gearing their needs closely with firm orders and recent sales trends.

The chart shows the relative magnitudes of the value of the inventory holdings among the three industrial groups as of the end of March 1953.¹ The greatest concentration of inventories is in the manufacturing sector. Three-fifths of the book value of business inventories at the end of the first quarter of 1953 were in manufacturing industries, with the durable goods industries holding 55 percent of the manufacturing total.

Also of interest is the fact that these proportions tend to change very slowly. For example, in mid-1950, when defense inventories comprised a very small fraction of the total, manufacturers' inventories constituted the same proportion of total business inventories as today—55 percent—and the distribution as between durable goods and nondurable goods producers was about the same as now.

Furthermore, five major manufacturing industries, namely, the primary and fabricated metals, machinery, motor vehicles, and food industries, account for about half of the total value of manufacturing inventories.

Factory stocks currently are divided by stages of fabrication as follows: Purchased materials, 37 percent of total; goods-in-process, 29 percent; and goods finished for shipment, 34 percent.

At the end of March one-fourth of the value of business inventories was in retailers' hands and one-eighth of the total value was held by wholesalers. In both retail and wholesale the value of inventories was equally distributed as between the durable and nondurable goods groups. Retail stocks are concentrated in three major kinds of business—the automotive, apparel, and general merchandise stores—which held about half of the total value of retail inventories. Here again the proportions have been relatively constant—the same distribution prevailing, for example, in June 1950.

Finally, the distribution of sales of the 3 industries was close to that of their value of inventories—in March 1953, on a seasonally adjusted basis, 52 percent of total sales of these industries were manufacturing; 30 percent, retail; and 18 percent, wholesale.

Defense inventories one-fifth

The character of recent inventory trends has been shaped in part by changes in stocks of goods earmarked for the production of defense items. Currently, inventories of defense goods at all stages of fabrication may be estimated conservatively at one-eighth of total business inventories. They are concentrated in manufacturers' hands and constitute about a fifth of all factory inventories. Furthermore, most of the defense stocks are held by durable goods producers, constituting about a third of their total inventories. These proportions are rough approximations since not only are direct quantitative data on the size of defense inventories extremely fragmentary, but also the items to be considered as defense inventories cannot be ascertained precisely. Moreover, the method used in deriving the proportion of defense inventories was based essentially on the ratio of defense deliveries to total shipments by industries. This procedure tends to understate the importance of defense

stocks since defense deliveries are not yet commensurate with inventories held for defense work.²

Movements in defense inventories follow a somewhat different pattern of timing relative to sales from those of civilian stocks. The latter usually continue to decline for several months after sales begin to expand and also keep rising for some time after shipments turn down. Defense inventories, in contrast, advance sharply even though deliveries may be practically negligible and begin to decline while deliveries are still in the expanding phase. The reason is that defense inventories are keyed to specific contracts which generally require a long period of preparation to reach peak deliveries, and to the trend in unfilled orders. As production reaches large volume, the turnover of inventories is more rapid.

Since June 1950, the accumulation of defense inventories has accounted for more than half of the total physical volume of goods added to manufacturers' stocks. The great bulk of the increase occurred in the second half of 1950 and in 1951. During 1952 inventory building for defense contracts generally leveled out, along with the slowing-up in the increase in deliveries of defense goods after the first quarter. Data are not available to chart the precise course of defense inventories.

Durable goods-in-process inventories high.

Changes in the composition of durable goods producers' inventories by stages of fabrication, however, throw some indirect light on the changes. These shifts are illustrated in the chart covering the period from 1948 forward.

The buying spurge in the summer of 1950 resulted in sizable liquidation in finished durable goods stocks. These were quickly rebuilt and shipping inventories of durable goods manufactures moved up to a peak in the late spring of 1952. The rapid growth in early 1952 was in some part an involuntary accumulation of consumer durables. It also included some war material awaiting shipment. The steel strike, together with the pickup in private demand, brought a correction in these stocks. In recent months some accumulation has been evident but shipping stocks of these producers are not out of line with deliveries.

Purchased materials were accumulated at a rapid pace following the onset of hostilities in Korea—nearly doubling in book value by the end of 1951. However, the purchased materials stocks tended moderately downward in the first part of 1952 although sales continued to rise. The moderate liquidation was rapidly accentuated by the steel strike at midyear. The subsequent buildup of purchased materials stocks was sufficient to restore book values to the previous high. Since the first of the year, liquidation has again occurred as sales have continued to expand.

Durable goods-in-process inventories have expanded steadily since mid-1950, increasing by nearly \$600 million in the first quarter of this year. The apparent excess of this

1. The value of all nonfarm inventories at the end of March of this year amounted to \$80.7 billion, seasonally adjusted, of which 93 percent, or \$75 billion, was held by 3 industrial groups—manufacturers, retailers, and wholesalers. In this discussion, business inventories refer to the book value held by these three groups. It should be noted that in the recent period since industrial wholesale prices have shown little change, movements in the book value of inventories approximate those in physical volume. For a detailed discussion of methods of inventory accounting and their relation to physical volume see the article in this issue, "Life Inventories and National Income Accounting."

2. The estimates embrace a definition of defense inventories consistent with the concepts and coverage of the inventory series of the Office of Business Economics. Included as defense stocks are all materials, owned by manufacturers, awaiting processing, in process, or awaiting shipment in the fulfillment of direct military or defense contracts and subcontracts. The figures exclude Government-owned materials located either in military factories or warehouses or on Government property, such as arsenals, depots, ship facilities.

It was possible to obtain from a number of companies the proportion of their inventories designated for defense. The reports were too few, however, to serve entirely as a basis of estimation, but they did provide useful corroborative checks of estimates derived from shipments data. Tabulations by the National Production Authority provided information on the proportion of shipments made under military and other direct defense related orders in the fourth quarter of 1952. The magnitude of defense stocks was roughly determined by applying these percentages by broad industry groups to recent inventory totals. The results produced a reasonable pattern—in the light of the available scattered published company data on defense inventories—ranging from 50 percent for the aircraft industry to 3 percent for furniture producers. The company data, in large measure, corroborated the estimates, although in some instances modifications were made in the ratios obtained through the use of the shipments on the basis of the direct inventory data reported by the companies. The estimating procedure hinges essentially upon the assumption that defense inventories bear the same relation to total stocks as defense shipments do to total deliveries. In view of the differential timing between deliveries and inventories, it is felt that this procedure results in some underestimation of the proportion of defense inventories to total.

category, relative to current volume of deliveries, is a reflection largely of defense inventories. The long production periods required for many defense items entail high goods-in-process stocks. Even when mobilization programs reach the point where purchased materials stocks need not be

civilian stocks alone. This was particularly true during the months of inventory building, blueprinting, and other preliminaries which precede actual production and deliveries.

Inventory-sales ratios lower

It is common practice among businessmen to gauge their inventory position by comparing the current ratio of inventories to sales with some past period which is considered normal. Indeed, many attempt to maintain the ratio. This procedure is simple, easily applied, and often provides a timely guide to inventory policy.

While inventory-sales ratios are useful indicators, they must be applied with caution, particularly in comparisons over two periods when sales are substantially different. Past experience indicates that with a growing volume of sales or output, stocks are expanded less rapidly, reflecting a more rapid turnover of inventories.

This suggests that the inventory-sales ratio is a positive indicator of existing or approaching imbalance with sales only when it is rising or already above the corresponding ratio of a prior period when inventories and sales were considered to be in balance. A falling ratio may reflect any one of three conditions depending on the size and character of the reduction and the industry or product involved, namely: a continuation of balance, a correction toward better balance, or movement toward a low position relative to sales. The current movements of the inventory-sales ratios are examined with the foregoing considerations in mind.

In March 1953, the ratio of total business inventories to sales was 1.5. This compares with 1.4 in March 1950 and with 1.3 in the prewar period, March 1940. The fact that the ratio currently is below that of prewar, when sales volume was much smaller, suggests, although not conclusively, that total business inventories may be in broad terms roughly in line with the current high rate of sales.

At the end of March the ratio of factory inventories to sales was 1.7; the wholesalers' ratio was 1.1; and the retailers', 1.5. These ratios, together with those for industry groups are shown in table 2 together with the corresponding figures for March last year, in early 1950, and in the prewar year 1940.

The general trend in stock-sales ratios throughout manufacturing has been downward in recent months. For each of the major manufacturing groups, except transportation equipment other than motor vehicles, the inventory-sales ratios currently are below a year ago. The expansion in sales was a contributing factor in each case. In the groups where inventories expanded, particularly the durable goods sectors, sales increased at a faster rate with the result that the inventory-sales ratio was reduced.

Also, except for the apparel and transportation equipment manufacturing industries, the ratios currently are below the prewar period of March 1940. On the other hand, for most of the major manufacturing groups, current inventory-sales ratios are above those which prevailed in March 1950, a period when economic activity was moving upward. Exceptions are the metals, motor vehicles, petroleum, and rubber industries.

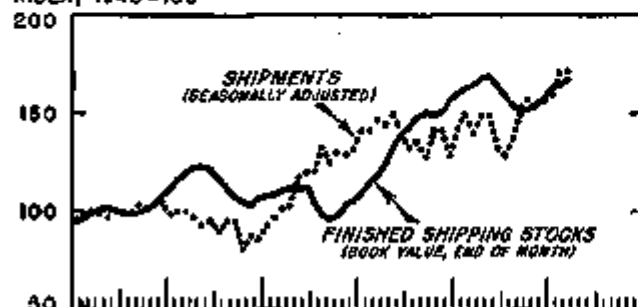
Retailer's ratios down

Among retailers the general pattern is much the same. Stock-sales ratios are generally below year-ago levels as sales have risen more rapidly than additions to stocks. Most durable and nondurable goods stores are carrying a lower quantity of goods relative to sales than in the prewar year of 1940. Stock-sales ratios of durable goods retailers, except for jewelry stores, are now higher than in mid-1950. How-

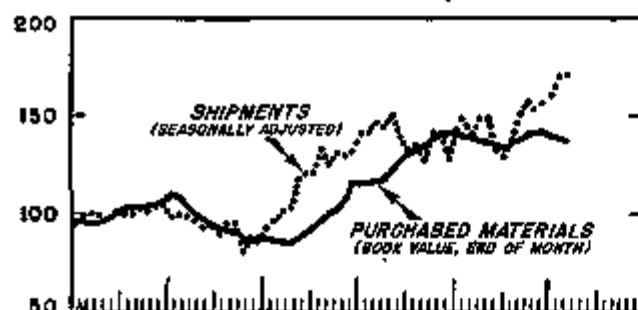
Durable-Goods Manufacturing Industries

Stocks of goods ready for shipment are about in line with the current volume of sales ...

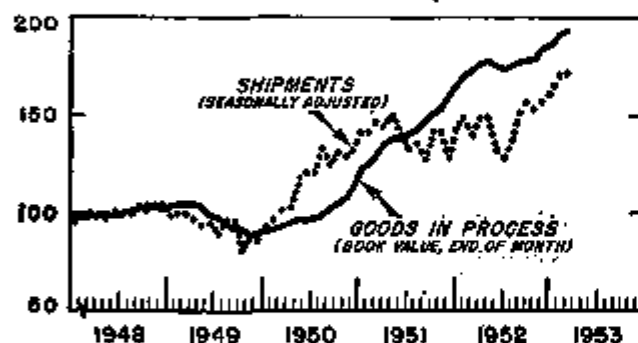
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and inventories of purchased materials have been held down relative to shipments ...



while goods in process are high relative to current deliveries, reflecting the sizable volume of defense output



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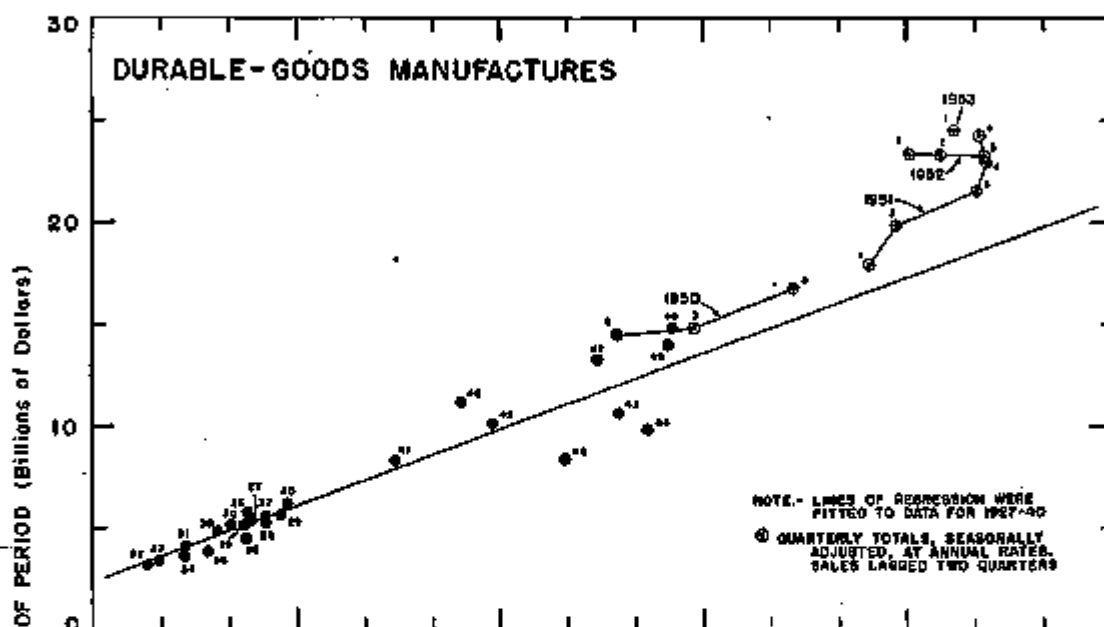
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increased, goods-in-process book values continue to expand as successive labor and other costs are added in.

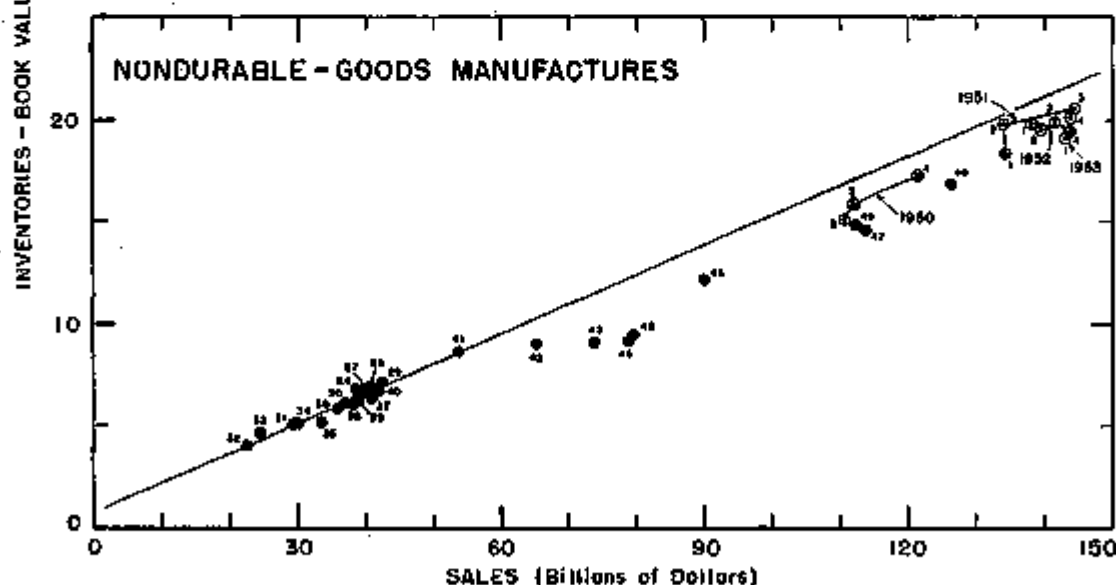
In the following sections, trends in inventory-sales relations are discussed. It is to be recalled that the inclusion of defense inventories in the initial mobilization period raised the ratios somewhat above what they would have been for

Factory inventories relative to sales are moderately above the pre-World War II years and the long-term relationship

The excess centers in durable-goods industries where the high proportion of long production defense items has expanded stocks above the usual peacetime pattern



Inventories of nondurables are currently lower relative to sales than in the late 1920's and 1930's



ever, those of nondurable goods stores are about the same or lower. These trends are illustrated for specific retail lines in the chart.

Examination of stock-sales ratios for individual consumer lines—especially the durables—indicates that most of them are currently below the year-ago levels. In this category are new passenger cars, television sets, refrigerators, farm and home freezers, and electric ranges. Stocks of new passenger automobiles in dealers' hands are higher than a year ago, but sales have risen more rapidly; currently, these stocks constitute a little less than one month's sales, a rate which is not high when compared with the best sales years of the prewar period. Similarly, stocks of television sets are one-fourth greater than a year ago, but sales have increased nearly 40 percent. Current stock-sales ratios are higher for radios (other than auto radios), washing machines, and dryers. In each of these cases stocks have increased substantially, with sales of radios being lower and of washing machines and dryers moderately higher.

Table 2.—Inventory-Sales Ratios of Selected Types of Business for Selected Years Ratio of End of March Inventories to March Sales Based on Seasonally Adjusted Data

Item	1940	1950	1952	1953
Total business	1.39	1.44	1.69	1.53
All manufacturers	2.21	1.66	1.98	1.72
Durable goods producers	2.67	1.92	2.20	1.88
Primary metals	n. a.	1.03	1.46	1.43
Fabricated metal products	n. a.	1.83	2.16	1.07
Electrical machinery	2.41	1.96	2.90	2.08
Machinery (excluding electrical)	3.04	2.61	2.77	2.61
Motor vehicles	1.22	1.42	1.07	1.23
Other transportation equipment	2.40	2.59	3.14	3.28
Lumber	2.70	1.35	1.84	1.39
Furniture	2.53	1.42	1.75	1.48
Stone	2.61	1.43	1.84	1.66
Professional and scientific instruments	n. a.	2.61	2.85	2.39
Miscellaneous (including ordnance)	1.53	1.88	2.62	2.11
Nondurable goods producers	1.80	1.54	1.73	1.55
Food	1.24	1.61	1.14	1.00
Beverages	2.29	2.16	2.48	2.25
Tobacco	6.90	4.44	5.78	5.30
Textile mill products	3.04	2.00	2.54	2.27
Apparel	1.09	1.09	1.72	1.61
Leather and products	2.28	1.91	2.54	1.95
Paper	2.17	1.30	1.68	1.41
Printing and publishing	.98	.92	1.10	1.02
Chemicals	2.21	1.59	1.88	1.90
Petroleum	2.00	1.46	1.83	1.28
Rubber	2.88	1.92	2.13	1.80
All wholesalers	1.94	1.00	1.21	1.11
Durable goods	1.94	1.00	1.06	1.01
Nondurable goods	1.13	.81	.87	.77
All retailers	1.61	1.30	1.55	1.47
Durable goods	2.02	1.56	2.22	1.94
Nondurable goods	1.31	1.25	1.23	1.20
Automotive	1.10	.70	1.48	1.20
Lumber, building, hardware	3.11	2.45	2.00	2.80
Furniture and appliances	2.48	2.62	2.30	2.17
Jewelry	4.98	4.98	4.14	3.65
Other retail-durable	2.83	2.28	2.40	2.00
Apparel	2.88	2.68	2.94	2.90
Drug	2.22	1.94	1.98	1.76
Food	.70	.70	.65	.68
General merchandise	2.35	2.22	2.23	2.22
Other retail-nondurable	.50	.70	.77	.78

Note.—1953 figures are March preliminary data.

Source: U. S. Department of Commerce, Office of Business Economics.

The evidence from the comparison of the inventory-sales ratios suggests that:

1. Because of rising sales over the past year, the inventory-sales ratios have been generally reduced, thus implying that

an improvement in the inventory position has occurred in some industries and lines; and

2. The generally lower ratios compared to the immediate prewar period suggests that inventories in some industries may be in balance relative to current sales as gauged by this past experience. In other cases, despite lower ratios, inventories are still not in proper balance.

Inventory-sales relationships

A more illuminating approach in evaluating the current inventory position is that in which inventory and sales movements are examined over a long span of years so as to try to discern whether or not some persistent relation has existed which could be considered as a "norm". This would permit an evaluation of the current position in terms of such a relationship. This procedure has three basic advantages over the use of ratios. First, it readily permits taking into account the differential rates of change between inventories and sales as indicated by the actual historical experience of the firms. Second, it enables the measurement of any lags in timing which characteristically have existed between inventory and sales fluctuations. And, third, the impact of changes in product and market technology on the sales-inventory relation can be seen in the "deviations" which are observed from an average line of relationship.

The main caution required in the use of the relationship approach is that the average inventory-sales relations based on prior periods may no longer be valid for the more recent years, particularly in view of significant changes in the product mix and in the market factors. Nevertheless, shifts from the average relation of past periods can be detected by the use of the inventory-sales relationship approach.

The method is specifically illustrated in the chart. Here the period used as a basis for the relationship was 1927 to 1940 and for each of the two groups of producers—durable and nondurable goods manufacturers—the indicated average line of relationship closely described the inventory-sales experience in this period. Also, in each case significant deviations from this average prewar relation occurred during the World War II period when the product mix shifted considerably and controls were imposed on materials flows and production operations. The extension of the prewar relation shown into the postwar years is of assistance in gauging within broad limits the apparent excess, adequacy, or inadequacy of current inventories—the yardstick in each case being the prewar experience.

For manufacturing as a whole, inventories are a little higher than would be expected for the current sales totals on the basis of the prewar relationship. This moderate "overage," however, appears to derive largely from the presence of defense inventories in the total. When durable and nondurable goods producers' inventories are separated, sharply contrasting pictures emerge.

The "regression" line in each panel indicates the book value of inventories associated with sales lagged two quarters on the basis of the 1927-40 relationship of inventories to sales of the respective groups. This relationship implies that a change of \$1 billion in sales of durable goods producers has been accompanied, on the average, with a lag of 6 months by a change of one-half billion dollars in the book value of inventories.

Durable goods stocks high

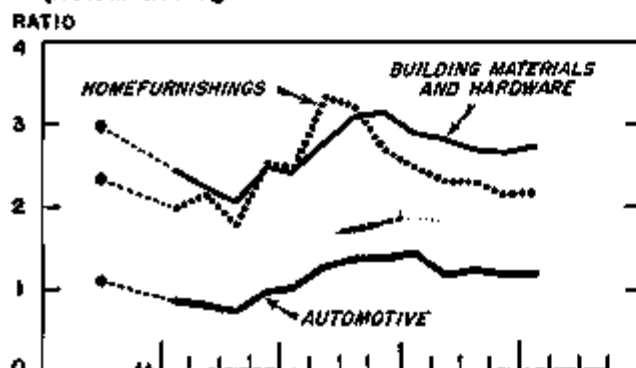
Current inventories of durable goods' producers are seen to be somewhat high on the basis of this calculation. It

should be pointed out that the position of the first quarter 1953 shown on the chart appears exceptionally high because it is matched with the sales in the third quarter of 1952 which were relatively low as a result of the steel shutdown. As noted earlier, part of this apparent excess is attributable to the high percentage of defense stocks which are currently in process and are not yet matched by a corresponding flow of deliveries.

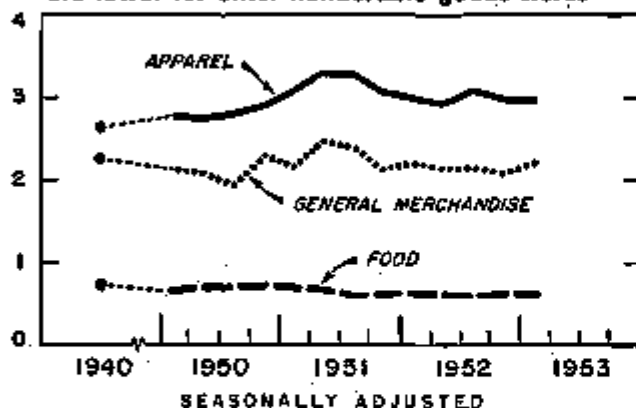
From the chart it appears that since 1946, the durable goods industries held a larger volume of inventories for a given amount of sales than would be called for on the basis of the sales-inventory relationship of the prewar years.

Inventory-sales ratios in retail lines have been declining since late 1951

Among retailers of durable goods, except automobiles, current ratios are below prewar averages



Current inventories of apparel retailers are higher relative to sales than in 1940, but are lower for other nondurable goods stores



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The 1946-47 period saw the sizable buildup of civilian inventories which were largely nonexistent at the end of World War II. As pipelines were filled, inventory positions moved back toward the line of historic relationship. But impetus to inventory accumulation deriving not only from direct defense contracts but also from the corollary large expenditures for producers' equipment has again moved the stock-sales position above the trend line since mid-1950. It is probable that the "new relationship" is at least in part the temporary outgrowth of these two sets of unique conditions.

It should be noted that the apparent "excess" cannot be accepted with too great a degree of preciseness. When examination is carried on to industry groups, the paucity of historical data precludes precise quantitative analyses of the overage. It may be pointed out, however, that currently inventories held by each of the durable goods industries, except lumber and furniture, appear to be above their long-term relationship. Proportionately, the largest apparent excess on this basis of measurement is in the transportation equipment groups.

Nondurable goods stocks low

The relation for the nondurable goods producers based on the prewar years 1927-40 implies that for each change of \$1 billion in sales, inventories have changed on the average, with a lag of two quarters, by about \$0.6 billion. Inventories held by these producers are currently lower relative to sales than in the prewar period. It appears that producers of "soft goods" have consistently managed since the early days of World War II to carry on larger volumes of transactions with smaller stocks than was true in the prewar era.

Increasing efficiency of inventory use has characterized the individual nondurable goods industries. Each of these major industries currently falls below its historic trend line, but those having the smallest deviations from the line are paper, chemicals, and petroleum.

Trade inventories have shown the same long-term trends as nondurable manufacturing stocks. Increasingly, stock turnover has improved with the larger sales. No evidence is now available that trade stocks as a whole are out of line. In many areas they are somewhat low relative to sales.

Variation in firms' position

The foregoing analysis was based on the consideration of the overall position of business inventories and a breakdown by major industrial groups. Even within these broad groups, there has been a considerable dispersion in inventory movements and in the trends of the inventory-sales relation. Within each industry group individual firms have shown an even more mixed pattern in their inventory movements and position. Some firms have been able to bring their inventories into better balance with sales while others have done the reverse, and these divergent tendencies have characterized firms in each of the broad size classes. Thus, while the impact of changing demand and other factors would affect all firms insofar as inventory policy is concerned, the magnitude of the adjustment would depend on the particular firm's situation.